

**Listing of Claims**

As shown below,

- Please cancel claims 12 and 22-27;
- please amend claims 1, 9, 13, 15-18, and 21; and
- please add new claims 28-32.

1. (Currently amended) A composition comprising:

(a) a polymerization accelerator comprising a biocompatible functional group and an N-vinyl group; and

(b) a polymerizable material,  
wherein the polymerization accelerator increases the rate that the polymerizable material becomes incorporated into a polymerized product in a polymerization reaction.

2. (original) The composition of claim 1 further comprising a polymerization initiator.

3. (original) The composition of claim 2 wherein the polymerization initiator comprises a photoinitiator group.

4. (original) The composition of claim 3 wherein the photoinitiator group is a long-wave ultra violet- or visible light-activatable molecule.

5. (original) The composition of claim 1 wherein the polymerizable material comprises a macromer.

6. (original) The composition of claim 5 wherein the macromer is selected from the group consisting of water-soluble macromers.

7. (original) The composition of claim 5 wherein the macromer is present at a concentration in the range of 0.5 – 50 wt%.

8. (original) The composition of claim 7 wherein the macromer is present at a concentration in the range of 1 – 30 wt%.
9. (currently amended) The composition of claim 1 further comprising an acceptor or reductant that forms a free radical and causes free radical polymerization of the polymerizable material in the polymerization reaction.
10. (original) The composition of claim 1 wherein the biocompatible functional group is selected from phosphonate ( $\text{PO}_3^-$ ), sulfonate ( $\text{SO}_3^-$ ), carboxylate ( $\text{COO}^-$ ), hydroxyl (OH), albumin binding moieties, and phospholipid moieties.
11. (original) The composition of claim 1 wherein the biocompatible functional group comprises a sulfonate group.
12. (cancelled)
13. (currently amended) The composition of claim 12 1 wherein the polymerization accelerator comprises a carbonyl carbon.
14. (original) The composition of claim 13 wherein the polymerization accelerator comprises an N-vinyl amide group.
15. (currently amended) The composition of claim 12 of 1 wherein the N-vinyl nitrogen is an atom in a heterocyclic ring.
16. (currently amended) The composition of claim 1 wherein the polymerization accelerator is able to react with the polymerizable material to form a polymeric matrix-the polymerized product having biocompatible properties.

17. (currently amended) The composition of claim 1 wherein the polymerization accelerator is present in an amount sufficient to improve the biocompatibility properties of the polymeric matrix polymerized product.

18. (currently amended) The composition of claim 1 wherein the polymerization accelerator is present in an amount sufficient to promote formation of the polymeric matrix polymerized product

19. (original) The composition of claim 18 wherein the polymerization accelerator is present at a concentration of 0.05 wt% or greater.

20. (original) The composition of claim 19 wherein the polymerization accelerator is present at a concentration in the range of 0.05 – 1.0 wt%.

21. (currently amended) A composition comprising:

(a) a polymerization accelerator comprising:

i) a biocompatible group and ii) an N-vinyl group; and

(b) a macromer,

wherein the polymerization accelerator is able to be reacted with the polymerizable material macromer to form a biocompatible matrix and the polymerization accelerator increases the rate that the macromer becomes incorporated into the biocompatible matrix.

22 –27. (canceled).

28. (New) The composition of claim 5 wherein the macromer comprises a protein or polyamino acid.

29. (New) The composition of claim 28 wherein the macromer is selected from the group consisting of gelatin, collagen, fibronectin, laminin, albumin, and active peptides thereof.

30. (New) The composition of claim 5 wherein the macromer comprises a polysaccharide.

31. (New) The composition of claim 30 wherein the macromer is selected from the group consisting of hyaluronic acid (HA), starch, dextran, heparin, and chitosan.

32. (New) A composition comprising:

(a) a polymerization accelerator comprising a biocompatible functional group, wherein the biocompatible functional group comprises a sulfonate group; and  
(b) a polymerizable material,  
wherein the polymerization accelerator is able to be reacted with the polymerizable material to form a biocompatible matrix and the polymerization accelerator increases the rate that the polymerizable material becomes incorporated into the biocompatible matrix.